KHAZNAFEROV, A.I.

Changes in the properties of reservoir oil in pools of the Kuma horizon in the Novo-Dmitriyevskoye field and of the horizon 5 of Maestic sediments in the Anastasiyesko-Troitskoye field. Trudy KF VNII no.9:102-123 '62. (MIRA 15:9)
(Petroleum geology)

GORBANETS, V.K.; KHAZNAFEROV, A.I.

Experimental investigations of the flooding of unrecovered oil from drowned strata with a solvent. Neftepron. delo no.9:7-11 '64.
(MIRA 17:10)

1. Krasnodarskiy filial Vsesoyuznogo neftegazovogo nauchno-issledovatel'skogo instituta.

KHAZNASH, N.

KHRISTOLOMEY, M., professor; ROMAN, S.; KHAZNASH, N. (Bukharest)

Diagnosis and surgical treatment of some therapeutic forms of hematulia. Vest.khir. 78 no.1:83-89 Ja '57. (MLRA 10:3)
(HEMATURIA
diag. & surg. of therapeutic forms)

KHAZOV, A., mashinist vrachchayushchikhsya pechey.

Good coating preserves brick linings. Stroi.mat.3 no.1:21-22 Ja '57.
(MLRA 10:3)

1. TSementnyy zavod "Bol'shevik".
(Kilns, Rotary)

KHAZOV, A., inzh. (g.Kaliningrad)

That is profitable. NTO 3 no.12:23 D '61. (MIRA 15:1)
(Sewage disposal)

KHAZOV, A.N.

FOMIN, V.P.; KHAZOV, A.N.

Device for locating boreholes from mine stopes. Gor. zhur. no.2: 50-52 F '58. (MIRA 11:3)
(Mining engineering) (Magnetic instruments)

KHAZOV, A.P., inzhener; POTAKHIN, V.N., inzhener.

Quarries for road building organizations. Avt.dor.19 no.5:(p 3 of cover) My '56. (MLRA 9:8)
(Quarries and quarrying)

KHAZOV, A.P., inzh.

Gorkiy-Shakhunya highway is being built by the efforts of the local population. Avt.dor. 19 no.11:10-11 N '56. (MIRA 10:10)
(Gorkiy Province--Road construction)

KHAZOV, B.F., inzh.

Drag in crane elements. Stroi. i dor. mashinostr. 5 no.4:15-18 Ap '60. (MIRA 13:9)
(Cranes, derricks, etc.) (Drag (Aerodynamics))

KHAZOV, B.F., inzh.

Static testing of tower cranes. Stroi. i dor. mash. 9 no.6:10-13 Je '64. (MIRA 18:11)

RESHETNIKOV, N.S., dotsent; GRUZINOV, A.V., inzh.; KHAZOV, I.I., inzh.; PETRULEVICH, N.A., tekhnik; MERZHANOVA, O.M., red.izd-va; PARAKHINA, N.L., tekhn.red.

[Album of drawings of parts with repair dimensions and additional parts (pieces) for the MAZ-200/501 motortrucks] Al'bom chertezhei detalei remontnykh razmerov i dopolnitel'nykh detalei (nasadkov) avtomobilia MAZ-200/501. Moskva, Goslesbumizdat. (Tipovaia tekhnologiia remonta lesozagotovitel'nykh mashin i mekhanizmov). Pt.2. (Detali shassi avtomobilia MAZ-200. 1960. 130 p. (MIRA 13:11)

1. Moscow. TSentral'nyy nauchno-issledovatel'skiy institut mekhanizatsii i energetiki lesnoy promyshlennosti. 2. Nachal'nik laboratorii tipovoy tekhnologii remonta mashin i organizatsii remontnykh predpriyatiy TSentral'nogo nauchno-issledovatel'skogo instituta mekhanizatsii i energetiki lesnoy promyshlennosti (for Reshetnikov).
(Motortrucks--Maintenance and repair)

RESHETNIKOV, N.S., dotsent; LEVANOVA, R.V., inzh.; RASHKOVSKAYA, A.N., inzh.; KHAZOV, I.I., inzh.; ANTONOVA, G.P., tekhnik; ANIKIYENKO, O.M., tekhnik; KORESHKOVA, V.I., tekhnik; KROTOVA, T.N., tekhnik; BIRYUKOVA, V.N., tekhnik; GOROKHOV, M.G., red.izd-va; PARAKHINA, N.L., tekhn.red.

[Album of working drawings of parts and units of MAZ-200 and MAZ-501 trucks] Al'bom rabochikh chertezhei detalei i uzlov avtomobilei MAZ-200 i MAZ-501. Moskva, Goslesbumizdat. Pts.2-3. 1960. 319 p. (MIRA 14:7)

1. Moscow. TSentral'nyy nauchno-issledovatel'skiy institut mekhanizatsii i energetiki lesnoy promyshlennosti. 2. Nachal'nik laboratorii tipovoy tekhnologii remonta mashin i organizatsii remontnykh predpriyatiy TSentral'nogo nauchno-issledovatel'skogo instituta mekhanizatsii i energetiki lesnoy promyshlennosti (for Reshetnikov).
(Motortrucks--Equipment and supplies)

KHAZOV, L. D.

USSR/Physics - Spectra, Flash 21 Sep 53

"Photoelectric Method of Recording Variation in Time of Spectra of Light Flashes," M.P. Vanyukov and L.D. Khazov

DAN SSSR, Vol 92, No 3, pp 523-524

Describes an improved apparatus for photoelectric recording of spectra which shows immediately curve of spectral distribution of emission at any specified moment. The resolution in time depends only on the rapidity of recording of phenomena on oscillograph, which for the time being is 10-8 sec.

268T92

Indebted to S.E. Frish, Corr Mem, Acad Sci USSR and to Acad A.A. Lebedev, who also presented article, 20 Jul 53.

268T92

FD-3203

USSR/Physics - Electricity, Discharge phenomena

Card 1/1 Pub 153-12/28

Author : Vanyukov, M. P., Isayenko V. I., and Khazov, L. D.

Title : Investigation of light phenomena associated with the growth of the channel of a spark discharge

Periodical : Zhur. Tekh. Fiz. 25, No 7, 1248-1256, 1955

Abstract : Experimental investigation using an electron-optical converter, of the space-time expansion of the visible and infrared luminescence of a spark discharge channel, and of the propagation of the shock wave generated by the discharge revealed: (a) the shock wave separated from the plasma of the discharge; (b) a layer of heated, non-ionized gas emitting infrared radiation in the form of arc lines was formed between the shock wave and the plasma; (c) the temperature of the discharge in inert gases increases with the atomic weight of the gas; (d) the average channel temperature was determined from measurements of the spectral density of energy brightness to be 57,000°K. Authors thanked Acad. A. A. Lebedev for assistance. Diagram, graphs, photos. Ten references: seven USSR.

Institution :

Submitted : November 24, 1954

S/120/62/000/005/019/036
E192/E382

AUTHORS: Yermakov, B.A. and Khazov, L.D.

TITLE: A video-amplifier for exponential pulses with a maximum signal/noise ratio

PERIODICAL: Pribory i tekhnika eksperimenta, no. 5, 1962. 117 - 120

TEXT: The gain in the signal/noise ratio (voltage ratio) at the output of an optimum filer, as compared with the ratio of a video-amplifier having a frequency characteristic $K(\omega)$, is expressed by (L.A. Vaynshteyn, V.D. Zubakov - Vydeleniye signalov na fone sluchaynykh pomekh (Separation of signals from random noise), 1960, Izd-vo Sov. radio):

$$\frac{\rho}{\rho_1} = \left(\frac{E\overline{v^2(t)}}{\pi S^2(t_{макс})}\right)^{1/2} = \quad (1)$$

$$= \left(\frac{\int_0^\infty S^2(t)\,dt \int_0^\infty |K(\omega)|^2\,d\omega}{\pi S^2(t_{макс})}\right)^{1/2},$$

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S/120/62/000/005/019/036
E192/E382

A video-amplifier ....

where $S(t)$ is the input signal, $v(t)$ is the white noise at the input, E is the energy of the signal, $S(t_{max})$ is the maximum amplitude of the signal at the output of the video-amplifer and ρ/ρ_1 is the ratio of the signal/noise ratios at the output of the optimum filter and the video-amplifier. Eq. (1) is used to determine ρ/ρ_1 for a three-stage video-amplifier with simple RC stages, the input signal being in the form $S(t) = \delta/\alpha - \delta(e^{-\delta t} - e^{-\alpha t})$. The parameters α and δ determine the shape, duration and energy of the pulse. The calculated results for various α/δ as a function of $\tau\delta$, where $\tau = RC$, are illustrated in Fig. 1. This shows that at a certain value of τ, ρ/ρ_1 has a minimum; this depends on the shape and duration of the pulse to be amplified. The minimum is also observed in the case of a 10-stage coil-compensated amplifier. The theory was verified experimentally by employing exponential pulses with $\alpha = 0.15\delta$ and $1/\delta = 0.6$ μs, which was produced by a special generator.

Card 2/3

ORLOVSKIY, Ye.L.; KHALFIN, A.M.; KHAZOV, L.D.; ZAVARIN, G.D.; KRUSSER, B.V.; SHCHELOVANOV, L.N.; TARANTSOV, A.V., red.; KUKOLEVA, T.V., red.; SMUROV, B.V., tekhn. red.

[Theoretical principles of electrical transmission of images; television and phototelegraphy]Teoreticheskie osnovy elektricheskoi peredachi izobrazhenii; televidenie i fototelegrafiia. [By] E.L.Orlovskii i dr. Pod obshchei red. A.V.Tarantsova. Moskva, Sovetskoe radio. Vols. 1 - 2. 1962. (MIRA 15:10)
(Television) (Phototelegraphy)

SAMSON, A.M.; STEPANOV, B.I., akademik; KHAZOV, L.D.

Generation threshold of an optical maser ad dependent on the properties of the resonator. Dokl. AN SSSR 148 no.2:317-320 Ja '63. (MIRA 16:2)

1. Institut fiziki AN Belorusskoy SSR. 2. AN Belorusskoy SSR (for Stepanov).

(Masers) (Electric resonators)

L 1776-66 EWA(k)/FBD/EWT(1)/EWP(e)/EWT(m)/EEC(k)-2/EWP(i)/T/EWP(k)/EWA(m)-2/
EWA(h) SCTB/IJP(c) WG/WH

ACCESSION NR: AP5025089 UR/0368/65/003/003/0230/0233
621.375.9:535.80

AUTHOR: Iventsitskaya, N. A.; Khazov, L. D. 44

TITLE: Improving the directionality of a ruby laser by means of an external reflector

SOURCE: Zhurnal prikladnoy spektroskopii, v. 3, no. 3, 1965, 230-233

TOPIC TAGS: ruby laser, laser beam, beam directionality

ABSTRACT: An increase in the distance L between the external mirrors of a ruby laser is shown to result in: 1) a generation which is limited to fewer modes, and 2) improved beam divergence. To show this experimentally, the authors used a 20-j pulsed [illegible] a ruby rod [illegible] mm long and 16 mm in diameter with opaque sides and [illegible] mirror, with a 70% reflection, was [illegible] while the other (opaque) mirror could be moved over a [illegible] measurements were made from the output mirror side. The angular beam divergence was measured photoelectrically. The experimental results showed that [illegible] at L = 13 m sharper

Card 1/2

L 1776-66
ACCESSION NR: AP5025089

beams were produced, and 2) in present-day ruby crystals (which contain undesirable microinhomogeneities) the ruby beam can be confined to an angle of 1—2' only at the expense of a 40-fold decrease in output power (at L = 13 m). Orig. art. has: 4 figures. [YK]

ASSOCIATION: none

SUBMITTED: 11Jan65 ENCL: 00 SUB CODE: EC

NO REF SOV: 001 OTHER: 004 ATD PRESS: 4111

Card 2/2

L 23071-66 EWD/EWT(l)/EWP(e)/EWT(m)/EE [illegible](k)-2/1/EWP(k)/EWA(h) IJP(c) WW/WH

ACC NR: AP6012850 SOURCE CODE: UR/0368/66/004/004/0345/0347

AUTHOR: Sventsitskaya, N. A.; Khazov, L. D.

ORG: none

TITLE: Some comparative studies of ruby lasers with plane-parallel and confocal resonators

SOURCE: Zhurnal prikladnoy spektroskopii, v. 4, no. 4, 1966, 345-347

TOPIC TAGS: ruby laser, laser resonator, plane parallel resonator, confocal resonator, energy yield, beam divergence

ABSTRACT: An experimental comparison of the energy and angular beam divergence of lasers with plane-parallel and confocal resonators was made. Two ruby rods (A and B, both 16 mm in diameter and 40 and 75 mm long, respectively, with a chromium concentration of approximately $1 \cdot 10^{19} cm^{-3}$) were pumped by a spiral xenon flashlamp. The confocal resonator mirrors were 99.5 and 73% reflective at 694 nm and had radii of curvature of 420 mm and diameters of 80 mm. The plane-parallel resonator mirrors were [illegible] and 77% reflective. Measurements of energy and angular beam divergence were carried out at a distance of 440 mm between the mirrors for each type of resonator. At a pump energy of 3750 j, rod A yielded 3.0 j (threshold energy 1440 j) in the plane-

Card 1/2 UDC: 621.378.325

L 22271-66

ACC NR AP6012853

parallel resonator and 5.7 j (threshold energy 1400) in the confocal resonator. Under identical pumping, rod B produced 6.0 j in the plane-parallel resonator and 10.5 j in the confocal resonator. Measurements indicated that the generation thresholds of the same rod in the confocal and plane-parallel resonators are almost identical. The angular beam divergence, determined from one-half the signal energy level, was approximately 3.5 times smaller for the plane-parallel resonator; determined from one-half the light intensity, angular beam divergence was 7 times smaller. The mean experimental and theoretical values of the generation period as a function of its absolute value and pumping energy show good agreement. Confocal resonators are suitable in cases where it is desirable to have a regular relaxation with a steady generation term or a uniform angular distribution of output energy. Confocal resonators are not suitable when maximum axial intensity of radiation is desired. Orig. art. has: 3 figures. [YK]

SUB CODE: 20/ SUBM DATE: 15Feb65/ ORIG REF: 002/ OTH REF: 009

ATD PRESS: 4236

Card 2/2 ULR

ACC NR: AP7001547 SOURCE CODE: UR/0020/66/171/003/0577/0579

AUTHOR: Savitskiy, Ye. M. (Corresponding member AN SSSR); Burkhanov, G. S.; Bokareva, N. N.; Khazov, N. P.

ORG: Institute of Metallurgy im. A. A. Baykov, Academy of Sciences SSSR (Institut metallurgii Akademii nauk SSSR)

TITLE: Investigation of the structure and properties of molybdenum-niobium alloy single crystals

SOURCE: AN SSSR. Doklady, v. 171, no. 3, 1966, 577-579

TOPIC TAGS: molybdenum niobium alloy, molybdenum niobium alloy property, molybdenum niobium alloy crystal, alloy single crystal, molybdenum alloy, niobium alloy

ABSTRACT: Single crystals of molybdenum-niobium alloys containing 0—100% niobium were grown from alloy bars obtained by vacuum melting components which contained 0.001—0.002% O_2, 0.0001—0.0005% H_2, and 0.01% C. All the crystals grown had [100] or [110] orientation. It was found that the electrophysical and mechanical properties of alloy single crystals strongly depended on the orientation. The highest ductility was found in crystals with [110] orientation. Differences in strength, reduction of area, and elongation between the crystals with [100] and [110] orientations were up to 50%. No anisotropy of hardness was observed. The content of interstitial impurities significantly affected the elongation and reduction of area. Increasing

UDC: 669.017:53

Card 1/2

ACC NR: AP7001547

the second component in molybdenum-niobium alloys increased the strength of single crystals and decreased the ductility following the same pattern as that of polycrystalline alloys. Single crystals of molybdenum, niobium and their alloys with up to 20% of the second component have a high ductility with a reduction of area of over 50%. Alloys containing over 40% of the second component have a lower ductility and fail along the cleavage plane [100]. Orig. art. has: 4 figures and 1 table.

SUB CODE: 11, 20/ SUBM DATE: 13Aug66/ ORIG REF: 004/ ATD PRESS: 5111

Card 2/2

KHAZOV, P.

Improvement of the operation of the driven roller for the large canvas of tractor-drawn combines. Tekhsov.MTS 15 no.2:15 Ja '54. (MLRA 7:2)

(Combines (Agricultural machinery))

KHAZOV P.

27-2-19/19

AUTHOR: None Given

TITLE: Information (Informatsiya)

PERIODICAL: Professional'no-Tekhnicheskoye Obrazovaniye, 1958, # 2, (153) pp 32-33 (USSR)

ABSTRACT: B.Kopilev, the Deputy Director for Cultural Education Work writes of the 25th anniversary of the Stepanetsk Agricultural Mechanization School in Cherkasskaya Oblast' (Stepanetskoye uchilishche mekhanizatsii sel'skogo khozyaystva, Cherkasskaya Oblast). . During these 25 years the school has graduated about 10,000 specialists in agricultural mechanization.

P.Khazov, Senior Inspector of the Aktyubinskaya Oblast' Labor Reserves Administration writes of the activites of the Aktyubinsk Oblast' Labor Reserves School for Agricultural Mechanization (Uchilishche mekhanizatsii sel'skogo khozyastva Aktyubinskogo oblastnogo upravleniya trudovykh rezervov)

V. Yatsenko and A.Sapozhnikov tell how the students of the Trade School No 39 in Sverdlovsk (Remeslennoye uchilishche No 39 g. Sverdlovska) spend their free time at different clubs and sports sections.

Card 1/2

Information

N.Latyntseva reports on the Agricultural Exhibition in Chimkent in which the school institutions of the Labor Reserves in Southern-Kazakhstanskaya Oblast' (Uchebnyye zavedeniya trudovykh rezervov Yuzhno-Kazakhstanskoy oblasti) took part.

General information is given on the publication of a new symposium, "With One's Own Hands" ("Svoimi rukami"). Published by Trudrezervizdat in 1957, it contains descriptions of models and designs in the fields of photography, electricity, radio engineering, model airplane flying and motor aquatics.

There are 4 photographs.

AVAILABLE: Library of Congress

Card 2/2

KHAZOV, P.D.

Method and technique of roentgenography of the breast in malignant tumors. Med. rad. 7 no.12:25-27 D'62. (MIRA 16:10)

1. Iz kafedry rentgenologii i meditsinskoy radiologii (nauchnyy rukovoditel' - prof. B.A.TSybul'skiy) Ryazanskogo meditsinskogo instituta imeni akademika I.P.Pavlova.

KHAZOV, P.D.

X-ray study of diseases of the breast. Nauch. trudy Riaz. med. inst. 15:148-153 '62. (MIRA 17:5)

1. Kafedra rentgenologii i meditsinskoy radiologii (ispolnyayushchiy obyazannosti zaveduyushchego kafedroy - dotsent V.I.Skotnikov, nauchnyy rukovoditel' - prof. B.A.TSybul'skiy) Ryazanskogo meditsinskogo instituta imeni Pavlova.

KHAZOV, P.D.

Diagnostic significance of calcification of the breast. Vest. rent. i rad. 37 no.5:73-74 S-O '62. (MIRA 17:12)

1. Iz kafedry rentgenologii i meditsinskoy radiologii (ispolnyayushchiy obyazannosti zaveduyushchego dotsent V.I. Skotnikov, nauchnyy rukovoditel' - prof. B.A. TSybul'skiy) Ryazanskogo meditsinskogo instituta imeni I.P. Pavlova.

KHAZOV, P.D.

Value of mammography for the clinical diagnosis of breast diseases. Sov.med. 26 no.1:52-56 Ja '63. (MIRA 16:4)

1. Iz kafedry rentgenologii i meditsinskoy radiologii (i. o. zav. - dotsent V.I.Skotnikov, nauchnyy rukovoditel' - prof. B.A.TSybul'skiy) Ryazanskogo meditsinskogo instituta imeni I.P.Pavlova.
(BREAST--DISEASES) (BREAST--RADIOGRAPHY)

SMIRNOVA, A.A., kand. med. nauk; KHAZOV, P.D.

Neurodystrophic calcifications and ossifications. Vestn. rent. i rad. 38 no.3:71-72 My-Je '63. (MIRA 17:7)

1. Iz kafedry rentgenologii i meditsinskoy radiologii (ispolnyayushchiy obyazannosti zav. - dotsent V.I. Skotnikov) Ryazanskogo meditsinskogo instituta imeni akad. I.P. Pavlova na baze Oblastnoy klinicheskoy bol'nitsy imeni N.A. Semashko (glavnyy vrach - zasluzhennyy vrach RSFSR B.N. Shirokov).

KHAZOV, P.D., aspirant (Ryazan', Chernobayevskaya ul., d.17, komnata 70)

Noncontrast roentgenography in the diagnosis of breast cancer. Vest. khir. 90 no.5:52-59 My'63 (MIRA 17:5)

1. Iz kafedry rentgenologii i meditsinskoy radiologii (ispolnyayu obchiy obyazannosti zaveduyushchego - dotsent V.I.Skotnikov, nauchnyy rukovoditel' - prof. B.A. TSybul'skiy) Ryazanskogo meditsinskogo instituta imeni akademika Pavlova (rektor - dotsent A.A. Nikulin) na baze oblastnoy klinicheskoy bol'nisty imeni N.A. Semashko) glavnyy vrach - zasluzhennyy vrach RSFSR B.N. Shirokov).

KHAZOV, P.D.

X-ray diagnosis of diseases of the breast without the use of contrast media. Nauch.trudy Riaz.med.inst. 18 no.2:349-356 '64. (MIRA 19:1)

1. Kafedra rentgenologii i meditsinskoy radiologii (ispolnyayushchiy obyazannosti zaveduyushchego - dotsent V.I.Skotnikov, nauchnyy rukovoditel' - prof. B.A.TSybul'skiy) Ryazanskogo meditsinskogo instituta.

Khazov, V. A.

137-1958-2-2723

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 75 (USSR)

AUTHORS: Khazov, V.A., Ignat'yev, Yu.A., Monakhov, I.I.

TITLE: A Semiautomatic Process of Pressing Ceramet Pieces in Single-section and Multisection Dies (Poluavtomaticheskiy protsess pressovaniya metallokeramicheskikh detaley v odnognezdnykh i mnogognezdnykh press-formakh)

PERIODICAL: V sb.: Poroshkovaya metallurgiya. Nr 4, Moscow, 1956, pp 63-68

ABSTRACT: Experience with automatic and semiautomatic dies for pressing pieces from powdered metals (bushings et al.) at a number of machine-building plants [the STZ (Stalingrad Tractor Plant), 1GPZ (State Locomotive Plant No. 1), the Tashsel'mash (Tashkent Agricultural Machinery Plant), et al.] has revealed that the use of these dies increases the efficiency of the presses and affords cost advantages. Using semiautomatic multisection dies on existing universal presses was no less economical than using the available automatic presses.

I.B.

Card 1/1

1. Ceramics--Pressing--Processes

ALTAYEV, Sh.; KHAZOV, V.M.

Using the chamber mining system in Karaganda Basin. Izv. AN Kazakh. SSR. Ser. gor. dela no.1:42-52 '59. (MIRA 12:9)
(Karaganda Basin--Coal mines and mining)

18.7200
~~18(7),25~~(

67863
SOV/125-60-1-6/18

AUTHOR: Khazov, V.Ya.

TITLE: Some Principles Governing the Electrical Processes of Butt Flash-Welding

PERIODICAL: Avtomaticheskaya svarka, 1960, Nr 1, pp 46-54 (USSR)

ABSTRACT: On the basis of general conclusions drawn from investigations of butt flash-welding, conducted at the laboratories of VNIIESO and the zavod "Elektrik" ("Elektrik" Plant), the electric processes in the welding circuit are analyzed and certain principles established. The main parameters in the process of butt flash-welding are the current, the resistance and voltages of the welding circuit. This article is a detailed analysis of the nature of changes in these parameters in the welding circuit. Figure 1 shows the circuit diagram simulating a machine for butt welding. The author concludes that: 1) the principles governing the electrical processes of butt flash-welding are sufficient for

Card 1/3

Some Principles Governing the Electrical Processes of Butt Flash-Welding

an accurate analysis of the fusion processes. 2) During stable welding the full electric power of the machine is 3 to 5 times less than the full power used during upsetting, and the equivalent resistance value of the butts being welded is 3 to 4 times higher than the full electric resistance of the welding machine during a short circuit. In conditions of stable welding the effective value of the voltage at the butts exceeds the effective value of the idle-running voltage. 3) The equivalent resistance value of the butts does not directly depend on the specific electrical resistance of the parts being welded and the size of their cross section area. It is determined by all factors including the thermaphysical properties of the welded alloys, the magnitude of secondary voltage in the welding transformer, the inductance of the welding machine, and the welding rate. There are 1 circuit diagram, 1 oscillogram, 1 graph, 1 table, and 5 references, of which 4 are Soviet and 1 English.

Card 2/3

67863
SOV/125-60-1-6/18

Some Principles Governing the Electrical Processes of Butt Flash-Welding

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut elektrosvarochnogo oborudovaniya (All-Union Scientific-Research Institute of Electric Welding Equipment)

SUBMITTED: March 14, 1959

Card 3/3

ZLOBIN, G.I., inzh.; KHAZOV, V.Ya., inzh.

Butt welding of small diameter tool blanks. Svar. proizv. no.10:30-31 O '60. (MIRA 13:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektrosvarochnogo oborudovaniya.

(Tool steel--Welding)

KHAZOV, V. Ya., Cand Tech Sci -- "Study of ~~joint~~ butt welding by the fusing of non-ferrous metals." Mos, 1961. (State Com of the Council of Ministers USSR on Automation and ~~Mach Construction~~ Machine Building. Central Sci Res Inst of Technol and ~~Mach Construction~~ Machine Building "TsNIIT Mash." ONTI) (KL, 8-61, 250)

24780
S/125/61/000/008/008/014
D053/D113

1.2400

AUTHORS: Nekrasov, B.M., Khazov, V.Ya.; Alekseyev, B.D., and Fridlyand, M.G. (Leningrad)

TITLE: Welding and brazing of chromium bronze

PERIODICAL: Avtomaticheskaya svarka, no. 8, 1961, 70-75

TEXT: Several welding and brazing processes were investigated to find out the most suitable process for joining Бр.Х 0,5 (Br. Kh0.5) bronze, and also for joining this bronze with copper, particularly M 1 (M1) copper. The Br. Kh0.5 bronze, containing 0.5 to 0.8% Cr, up to 0.003% Pb and 0.02 to 0.06% Fe, is used for busses in electrical equipment because of its high mechanical strength and a sufficiently good electrical conductivity (γ = 45 to 50 m/ohm · sq mm). Its tensile strength (σ_t) is 42 to 48 kg/sq mm; Brinell hardness (H_B) - 100 to 110 kg/sq mm; yield strength (σ_y) - 35 to 38 kg/sq mm; and the elongation (δ) is 12 to 17%. The H_B can be increased to 115 - 130 kg/sq mm by cold-hardening. The investigation was carried out jointly by the VNIIESO and a machine building plant [Abstracter's note: the plant

Card 1/3

Welding and brazing...

is not identified]. The following processes were tested: (1) brazing and gas welding with an oxyacetylene flame; (2) arc welding with a carbon electrode; (3) a-c and d-c argon-arc welding with a non-consumable electrode; (4) flash butt welding; and (5) friction welding (for purposes of comparison). The minimum requirements for weld joints were σ_t not less than 35 kg/sq mm and γ not less than 45 m/ohm • sq mm. These requirements were fulfilled by using (a) an oxyacetylene flame and a ПСр-45 (PSr-45) filler metal for brazing the bronze with copper and (b) using flash butt welding for bronze to bronze joints. The ultimate strength of the weld joints thus obtained attained 90 to 100% of the parent metal strength. The flash butt welding of busses made of Br. Kh0.5 bronze was done on an МСЛ-300 (MSL-300) welder designed by the zavod "Elektrik" ("Elektrik" Plant). This welder is fitted with a pneumatohydraulic drive, pneumatohydraulic clamps, and a 300-KVA transformer with a 380-V primary winding. The following optimum process parameters have been found for welding bronze busses, 60 x 6 mm in cross-sectional area, on this welder: (1) secondary voltage of the welding transformer - 5.28 V; (2) power during fusion - 50 to 55 KVA; (3) power factor during fusion - 0.8; (4) power during upsetting - 250 KVA; (5) power factor

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Welding and brazing...

during upsetting - 0.35; (6) welding current during fusion - 9,500 to 10,500 A; (7) welding current during upsetting - 47,000 A; (8) upsetting force - 18,000 to 20,000 kg; (9) die-clamping pressure - 45,000 to 50,000 kg; (10) rate of fusion prior to upsetting - 14.4 mm/sec; (11) upsetting speed - 200 mm/sec; (12) fusion period - 5.5 sec; (13) duration of upsetting under current - 0.1 to 0.12 sec; (14) total setting length - 43 mm; (15) fused length - 20 mm; and (16) upset length - 10 mm. The ultimate tensile strength of the weld joints was 39 to 46 kg/sq mm, and the electrical conductivity 45 m/ohm · sq mm. There are 4 figures and 1 table.

ASSOCIATION: VNIIESO (Nekrasov, B.M. and Khazov, V.Ya.)

SUBMITTED: January 16, 1961

Card 3/3

KHAZOV, V.Ya.

Contact resistance in flash butt welding. Trudy LPI no.216:160-168 '61. (MIRA 14:11)

(Electric welding)

KHAZOV, Yu. L.

~~PHYSICO-TECHNICAL INSTITUTE OF THE USSR ACADEMY OF SCIENCES, LENINGRAD.~~

"Investigation of Nuclear Isomerism in Hf^{180m}," Nuclear Physics, V. 6, (1958) pp. 561-574; by V.B.. Gvozdev, L.I. Rusinov, Yu. I. Filimonov, and YUl L. Khazov, (North-Holland Publishing Co., Amsterdam).

abst: The coefficient of internal conversion of the 57.6 keV transition in the L-shell of Hf^{180m} was measured and found to be 0.33 0.10. The -transition is shown to be of the E1 type. A 501.2 keV -transition has been detected; measurements of the internal conversion coefficient yield 0.035 o.014. The 501.2 keV -transition is of the E3 type. The level with an excitation energy 1 142.9 keV was found to possess a spin 9 and negative parity. The experimental lifetimes for the 57.6 keV and 501.2 keV -transition exceed those predicted by the single particles model by respectively 10 and 10 times. This large discrepancy is due to the high forbiddenness of the -Transitions with respect to the quantum number K.
Internal conversion coefficients have also been measured -transitions of 93.3 keV, keV, 332.4 keV and 443.6 keV energy. The transitions were all found to be of the E2 type. The cross section for production of Hf^{180m} in the (n,) reaction has been determined and found to equal 0.18 0.07 barns.

Physico Tech Inst., AS USSR Moscow.

KHAZOV, Yu. L.

PHASE I BOOK EXPLOITATION SOV/3509

Akademiya nauk SSSR. Radiyevyy institut

Trudy, t. IX (Transactions of the Radium Institute, Academy of Sciences USSR, Vol. 9) Moscow, Izd-vo AN SSSR, 1959. 287 p. Errata slip inserted. 1,700 copies printed.

Ed.: N.A. Perfilov, Doctor of Physical and Mathematical Sciences; Ed. of Publishing House: G.M. Aron; Tech. Ed.: A.V. Smirnova.

PURPOSE: The volume is intended for physicists.

COVERAGE: The book represents volume 9 of the Transactions of the Radium Institute and contains the results of studies conducted at the Institute chiefly from 1955 to 1956. There are a number of articles dealing with the study of nuclear reactions occurring with particles of different energies ranging from several eV up to hundreds of MeV. Others treat different problems of the physics of neutrons. Results of studies of various neutron sources, neutron energy distribution in a moderator (water), and other problems connected with the theory of neutron interaction with matter are presented. The majority of the articles are concerned with problems of method. The authors provide a complete description of the construction of equipment and of the results of tests performed under laboratory conditions. No personalities are mentioned. References accompany individual articles.

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SOV/56-36-2-52/63

21(8)

AUTHORS: Gvozdev, V. S., Khazov, Yu. L.

TITLE: The Production Cross Section of Te^{125m} According to a (n,γ) Reaction (Secheniye obrazovaniya Te^{125m} po reaktsii (n,γ))

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 36, Nr 2, pp 632-633 (USSR)

ABSTRACT: The authors measured the formation cross section of the isomeric state of Te^{125} of the spin 11/2, the (n,γ) reaction was used for this measurement. The above-mentioned cross section was determined by comparing with the cross section of the reaction Hf^{180} (n,γ)Hf^{181} which was assumed to be equal to (10 ± 3) barn. The radiation sources for the measurements were prepared from the separated isotopes Te^{124} and Hf^{180}, they simultaneously were irradiated in a neutron flow. The spectrum of the electrons of the internal conversion of T^{125m} and Ta^{181} (which are produced in the β^--decay of Hf^{181}) was investigated by means of a β-spectrometer. A diagram shows the K-lines of the internal-conversion electrons of the γ-transitions of Ta^{181} (133.02; 136.25; and 136.85 kev) and of Te^{125m} (109.1 kev).

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The Production Cross Section of Te^{125m} According to a (n,γ) Reaction

SOV/56-36-2-52/63

The production cross section of Te^{125m} according to the reaction (n,γ) can be calculated by determining the ratio of the intensities of the lines K = 109.1 and K = 133.02 , it was equal to (40 ± 25) millibarn. The ratio of the formation cross sections of Te^{125m} (spin 11/2) and Te^{125} (spin 1/2) amounted to 0.006. There are 1 figure and 2 references.

ASSOCIATION: Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk SSSR
(Leningrad Physico-Technical Institute of the Academy of Sciences, USSR)

SUBMITTED: November 6, 1958

Card 2/2

S/048/60/024/012/001/011
B019/B056

AUTHORS: Gvozdev, V. S., Rusinov, L. I. (Deceased), and Khazov, Yu. L.

TITLE: Study of the W^{182} Level Scheme

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960, Vol. 24, No. 12, pp. 1444-1448

TEXT: The present paper was read at the 10th All-Union Conference on Nuclear Spectroscopy, which was held in Moscow from January 19 to January 27, 1960. For the study of highly excited W^{182} levels, the internal conversion coefficients of a number of γ-transitions were determined. The excited W^{182} levels were obtained from the β-decay of Ta^{182} (half-life 111 days), which had been obtained from the reaction $Ta^{181}(n,\gamma)Ta^{182}$. The measurements were made with a β-spectrometer with a $W\sqrt{2}$-focusing of electrons. In order to avoid an action of the Ta^{183} produced in the above-mentioned Ta decay (half-life, five days), the measurements were carried out 40 days after neutron bombardment. For

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Study of the W^{182} Level Scheme

S/048/60/024/012/001/011
B019/B056

energies of the internal conversion electrons of up to 100 kev, sources having a thickness of 0.5 $mg.cm^{-2}$ for energies of from 1000 to 1200 kev with 1.7 $mg.cm^{-2}$, and for 820-960 kev, such having a thickness of 13 $mg.cm^{-2}$ were used. A conversion line was found, which is close to an electron energy of 1088.8 kev. The authors conclude that an excitation energy of 1255 kev must be ascribed to the level, from which a γ-transition with an energy of 1158.3 kev occurs. The internal conversion coefficients were obtained by comparing the intensities of the conversion electrons and the γ-emission of the γ-transitions considered with those of the conversion electrons and the γ-radiation of the 1222-kev transition. The conversion coefficients and the multiplicities of the W^{182} transitions are given in Table 1. Table 2 shows a comparison between the experimental and theoretical relations of the γ-transition probabilities B(E2). D. A. Varshalovich is thanked for a discussion. There are 4 figures, 2 tables, and 10 references: 6 Soviet, 3 US, and 1 Danish.

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Study of the W^{182} Level Scheme

S/048/60/024/012/001/011
B019/B056

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk SSSR (Institute of Physics and Technology of the Academy of Sciences USSR)

Text to Table 1: 1) Transition energy; 2) Theoretical value of the conversion coefficients; 4) Intensity of the conversion electrons; 5) Intensity of γ-radiation; 6) Experimental values of the conversion coefficients; 7) Multiplicities.

Таблица 2

Сравнение экспериментальных и теоретических отношений приведенных вероятностей γ-переходов с общего уровня с теоретическими

1 Энергия возбуждения общего уровня (keV); спин и четность	2 Энергия γ-перехода, keV	3 Спин и четность конечного состояния	4 Экспериментальное соотношение $B(E2)$	Теоретические соотношения $B(E2)$ 5			
				по работам Давыдова	по правилу Алага		
					$K=0$	$K=1$	$K=2$
1222	803	4^+	$\leq 0,06$	0,2	2,58	1,145	0,07
2^+	1122	2^+	1,85	2,0	1,43	0,36	1,43
	1222	0^+	1,0	1,0	1,0	1,0	1,0
1332	1003	4^+	0,63	0,8	0	2,5	0,4
3^+	1232	2^+	1,0	1,0	0	1,0	1,0
1258,4	920	4^+	1,55	$I=2$ 0,1	1,8	3,23	0,049
				$I=3$ 0,8	0	2,5	0,4
2^+	1157,3	2^+	1,0	$I=2$ 1,0	1,0	1,0	1,0
				$I=3$ 1,0	0	1,0	1,0

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B019/B056

Text to Table 2: 1) Excitation energy of the joint level (kev); spin and parity; 2) Energy of the γ-transition; 3) Spin and parity of the final state; 4) Experimental relation B(E2); 5) Theoretical values of B(E2) according to A. S. Davydov and Alaga.

Определение коэффициентов конверсии и мультипольностей переходов в W^{184}

1 Энергия γ-перехода, keV	2. Теоретические значения α_K						4 Интенсивность конверсионных электронов	5 Интенсивность γ-лучей	6 Экспериментальные значения α_K	7 Мультипольность γ-перехода
	E1	E2	E3	M1	M2	M3				
329	0,0018	0,0045	0,0094	0,0096	0,025	0,049	4,76	3±2	0,006 ±0,004	E2
960	0,00175	0,0042	0,0086	0,0087	0,0240	0,044	4,57	2,5±1,5	0,007 ±0,005	E3
1003	0,00148	0,00356	0,0075	0,00769	0,0188	0,0361	6,80	9±3	0,003 ±0,001	E2 (+M1)
1122	0,00123	0,0030	0,0062	0,0061	0,0142	0,0275	100	100	0,0039±0,0002	E2
1158,3	0,00110	0,00285	0,0059	0,0057	0,0133	0,026	5,0	7,1*	0,0027±0,0003	E2
1189	0,00112	0,00275	0,0056	0,0055	0,0126	0,024	64,2	56,8*	0,0043±0,0002	E3 или E1+M2
1222		0,0026					56,2	84±8		E2
1232	0,00104	0,00252	0,0052	0,0049	0,0112	0,0215	21,9	35±10	0,0024±0,0008	E2

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S/056/60/039/006/008/063
B006/B056

AUTHORS: Rusinov, L. I. (Deceased), Borovikov, A. V., Gvozdev, V. S., Porsev, G. D., Sakharov, S. L.; Khazov, Yu. L.

TITLE: Investigation of the Decay Scheme of Dy^{166}

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 6(12), pp. 1529-1533

TEXT: Contradictions between theory and experiments on the subject of Ho^{166} gave rise to investigations of the spectrum of internal conversion electrons and of the spectrum of gamma rays arising with the β-decay of Dy^{166} (going over into Ho^{166}). A report is given here on these investigations, which have led to a determination of the spin characteristics of the Ho^{166}-nucleus level. Dy^{166} ($T_{1/2}$ = 80.2 hours) was obtained from Dy^{164} by double neutron capture. The target enriched with Dy^{164} to 86.5% was exposed to a neutron irradiation for 6 - 7 days, and 36 hours after the end of this

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irradiation, the spectrum of the internal conversion electrons was recorded. Then, the Dy^{165}-content ($T_{1/2}$ = 2.4 hours) is negligible. The conversion electron spectrum of the Ho^{166}-nucleus, formed in the β-decay of the Dy^{166} is shown in Fig. 5. Besides the transitions with 28, 54.2, and 82.5 kev of the Ho^{166} nucleus, this spectrum also shows the 81-kev transition of the Er^{166}-nucleus, which is produced in the β-decay of Ho^{166}. Conversion electrons, which correspond to transitions with energies of more than 82.5 kev in the Ho^{166}-nucleus, were not discovered. Their intensity would have to be less than 0.5% of the intensity of the K-line of the transition with 82.5 kev. The relative conversion coefficients determined from this spectrum are given in Table 1. For a comparison, also the conversion coefficients given by L. A. Sliv and I. M. Band are mentioned. Also the spectra of the γ-radiation and the γγ-coincidences were investigated. It was found that between the gamma quanta with 28 and 54.2 kev coincidence exists, but not between the latter and the 82.5-kev quanta. From the conversion coefficient ratios the types of the transitions were determined:

Investigation of the Decay Scheme of Dy^{166} S/056/60/039/006/008/063
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the gamma transitions with 28 and 82.5 kev were found to be pure M1 transitions, the 54.2-kev transition a pure E2 transition. The intensities shown in Fig. 1 have an accuracy of up to 2-3%. It was further found that $(55\pm2)\%$ of all Dy^{166} decays lead to the formation of Ho^{166} in the excited state with 82.5 kev, $\sim 43\%$ to Ho^{166} in the ground state. Fig. 6 makes a suggestion for schemes of the lower levels of the Ho^{166}-nucleus; the first variant is the most probable. The authors thank D. A. Varshalovich for discussions. There are 6 figures, 2 tables, and 6 references: 2 Soviet, 1 US, 1 Dutch, and 1 Danish.

ASSOCIATION: Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk SSSR
(Leningrad Institute of Physics and Technology of the Academy of Sciences USSR)

SUBMITTED: June 29, 1960

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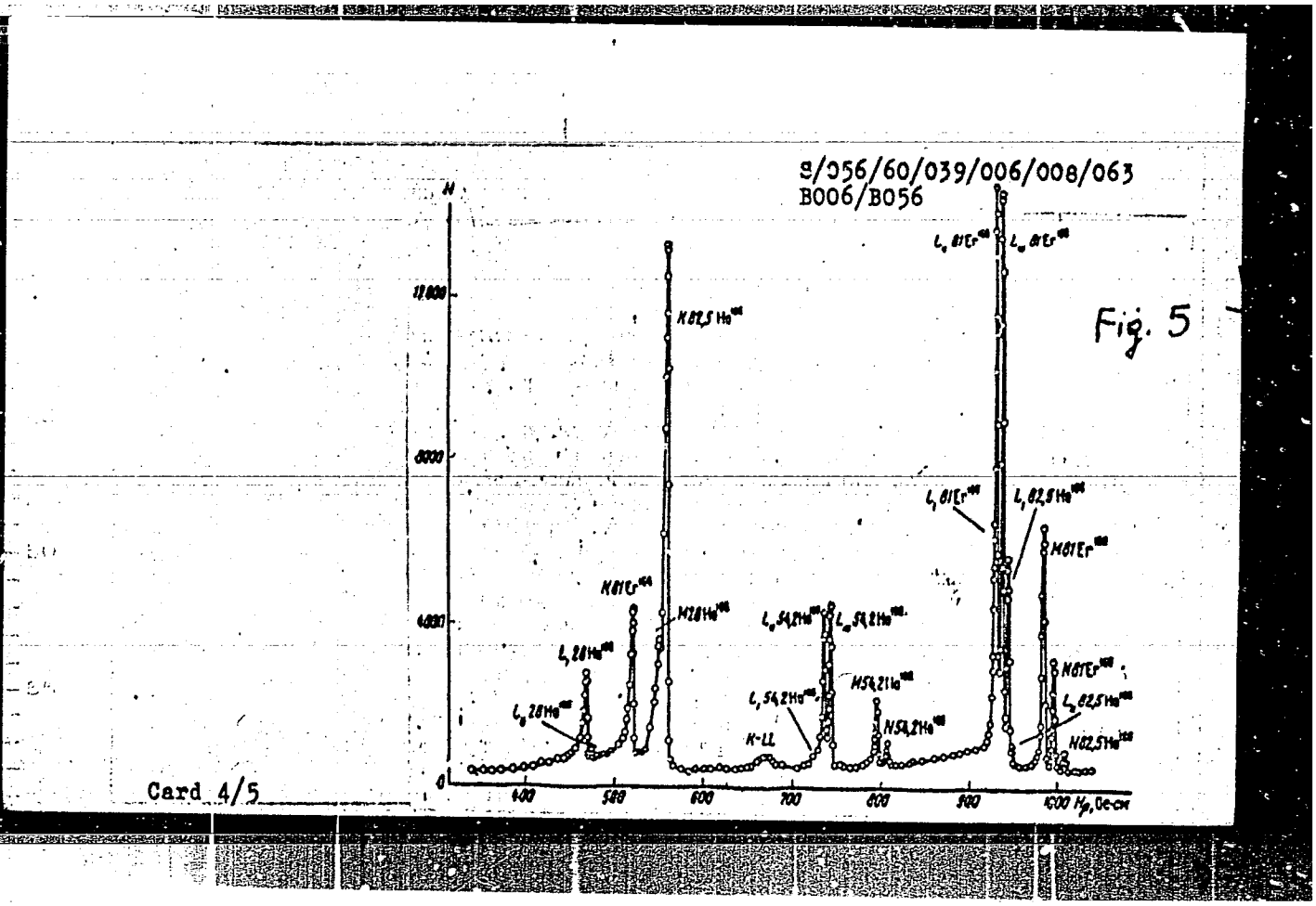

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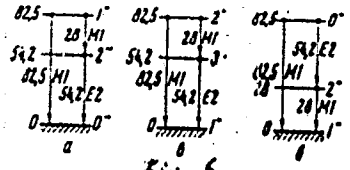

Fig. 6.

Text to Table 1:
1) Relative conversion coefficients. 2) Experimental. 3) Calculated for the transition ... 4) Intensity of the transition.

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Таблица 1

E_γ, keV	Относительные коэффициенты конверсии 1							4 Интенсивность перехода
	2 Экспериментальные	Вычисленные для перехода 3						
		E1	E2	E3	M1	M2	M3	
		$\alpha_{L_I}/\alpha_{L_{II}}$						
28	10,5 ± 0,3	1,45	0,01	0,014	10,7	14,4	13,0	0,23 ± 0,01
		$\alpha_{L_I}+\alpha_{L_{II}}/\alpha_{L_{III}}$						
54,2	0,85 ± 0,03	2,7	0,89	0,94	76	3,22	0,53	0,23 ± 0,01
		$\alpha_{L_I}/\alpha_{L_{II}}$						
82,5	11,0 ± 0,4	3,55	0,1	0,017	11,4	8,8	6,3	1
		α_K/α_L						
	7,6 ± 0,2	6,1	0,5	0,04	6,61	3,16	0,7	
81Er								1,05 ± 0,01

KHAZOV, Yu.L.; BAK, M.A.; PETRZHAK, K.A.; ROMANOV, Yu.F.

Energy distribution of neutrons in the water surrounding the source.
Trudy Radiev.inst.AN SSSR 9:91-103 '59. (MIRA 14:6)
(Neutrons)

RUSINOV, L.I. [deceased]; APTEKAR', R.L.; GVODEV, V.S.; SAKHAROV, S.L.; KHAZOV, Yu.L.

Level scheme of Eu^{153}. Zhur. eksp. i teor. fiz. 40 no.1:79-84 Ja '61. (MIRA 14:6)

1. Leningradskiy fiziko-tekhnicheskiy institut.
(Europium) (Samarium--Decay)

KHAZOVA, A.

Complete utilization of resources. NTO no.8:10-11 Ag '59.
(MIRA 12:11)

1. Uchennyy sekretar' soveta pervichnoy organizatsii Nauchno-tekhnicheskogo obshchestva tsvetnoy metallurgii zavoda im. Ordzhonikidze, g. Kol'chugino, Vladimirskoy oblasti.
(Kol'chugino (Vladimir Province)--Nonferrous metal industries)

USSR/Metals - Cast Iron Apr 52

"Obtaining and Heat Treatment of Cast Iron With Globular Graphite," A. V. Khazova, T. G. Demidova, Engineers, M. N. Kunyavskiy, Cand Tech Sci, Chelyabinsk, Moscow Automotive Mech Inst

"Litey Proizvod" No 4, pp 22-28

Describes procedure of modifying cast iron with magnesium by adding it in combination with ferrosilicon to molten metal. Discusses various processes of heat treatment, such as: graphitizing annealing to eliminate chilling effect; low-temp annealing to decomp eutectoid cementite and

213T100

KHAZOVA, A. V., Engr

Increase toughness and plasticity of cast iron; increasing amt of combined carbon to improve cast iron strength; obtaining metastable structures and flame hardening to increase resistance to wear, fatigue strength, etc. Illustrated by numerous micrographs and diagrams.

213T100

12(2) SOV/113-59-3-13/17

AUTHORS: Komarov, A.R.; Khazova, A.V.; Titov, I.V.

TITLE: The Modification of Cast Iron by Using Magnesium Under Pressure (Modifitsirovaniye chuguna magniyem pod davleniyem)

PERIODICAL: Avtomobil'naya promyshlennost', 1959, Nr 3, pp 40 - 43 (USSR)

ABSTRACT: The imperfection of methods for introducing magnesium and other modifying additions to liquid cast iron is one of the reasons why high-strength cast iron has found no wide-spread use. In the USSR, pure metallic magnesium, its alloys or magnesium-containing mixtures are used as modificators. The author reviews briefly the different methods used in the USSR. At the Gor'kovskiy avtozavod (Gor'-kiy Automobile Plant) the modification with pure magnesium was performed under a bell-shaped chamber with a special device providing a sufficiently deep penetration of the magnesium into the liquid

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The Modification of Cast Iron by Using Magnesium Under Pressure

metal as shown by Figure 1. This method had the disadvantage that the magnesium consumption is up to 1% of the weight of cast iron and it does not reliably provide high-strength cast iron with globular graphite structure. At the Syzranskiy gidroturbinnyy zavod (Syzran Hydraulic Turbine Plant) a method was developed using a forehearth furnace as shown by Figure 2. The magnesium consumption amounts to only 0.4 - 0.6% of the cast iron weight, while the assimilation of the magnesium is up to 10 - 15% compared to 5 - 10% with the first method. However, the operation of the furnace is interrupted and the use of the forehearth capacity is limited to 50 - 60%. At a number of plants, devices for introducing magnesium were tested, whereby a rotat-

ing crucible with a special chamber was used which was connected with the interior cavity by a special canal. The device (Figure 3), designed at the Gor'kiy Automobile Plant, may serve as an example for this type. Thereby, a magnesium assimilation of 20 - 25% was obtained. Recently, methods were developed which were based on increasing the evaporation temperature of magnesium by increasing the pressure on the metal surface in hermetic devices. Figures 5 and 6 show examples of such devices. The latter was developed by TsNIITMASh. Figure 7 shows a device designed by the Czech engineer Otahal. He established that the amount of magnesium required for modifying cast iron is considerably lower at a pressure of 5 ~ 5.5 atm. In this case, the amount of magnesium required is only 0.2% of the weight of the cast iron as shown by a graph (Figure 8). NIITAvtoprom investigated the cast iron modification by magnesium when the cast iron crankshafts of the automobile "Volga" were introduced, and de-

The Modification of Cast Iron by Using Magnesium Under Pressure

veloped the laboratory device shown in Figure 9. It consists of an airtight chamber into which the crucible with the liquid cast iron is placed. The magnesium is pushed into the liquid cast iron by a bar from the cover of the chamber. The latter is filled with compressed air which was varied during the tests from 3 to 8 atm, while the metal temperature was 1420°. For all tests, amounts of magnesium equal to 0.2% of the weight of the cast iron were used. According to the graph, Figure 10, the best results were obtained at a pressure of 5 - 6 atm, since then the air pressure was about equal to the pressure of saturated magnesium vapors whereby also a thorough mixing of the metals was obtained. Based on the experiments of NIITAvtoprom, two projects were developed. One, constructed by NIITAvtoprom itself, is shown by Figure 11. With this equipment, the modification of 500 kg cast iron lasts 1 - 1.5 minutes. The other version was developed by the Gor'kiy Automobile Plant and is

shown by Figure 12. This equipment consists of a cylindrical chamber 1,500 mm in diameter and 3,000 mm long. The crucible containing 500 kg of liquid cast iron is placed on a small truck which is pulled by an electric winch into the interior of the chamber. The chamber entrance is closed by an airtight spherical door. Another opening is located at the top of the chamber, also closed by an airtight door, for introducing the container with the magnesium. A pneumatic cylinder is used for pushing the charge into the liquid metal. The chamber is filled with compressed air at a pressure of 6 atm, whereby 6 cu.m compressed air are required. The modification process lasts about 1.5 - 2 minutes and the entire operation 4 - 5 minutes. The liquid iron is transferred to the casting crucible, where 0.3% pulverized 75%-ferrosilicon and 0.025% cryolith are added for reducing the sulfur content. By melting cast iron in an electric arc furnace with basic lining and by modification with magnesium, it is possible

The Modification of Cast Iron by Using Magnesium Under Pressure

to obtain high-strength cast iron with a structure of globular graphite. The consumption of pure magnesium is thereby 0.06 - 0.08% of the weight of the liquid cast iron. When the sulfur content of cast iron is 0.003 - 0.005% and 0.002 - 0.003% after the modification, then it is adequate to have a magnesium content of 0.01 - 0.03% for obtaining cast iron with globular graphite. The modification equipment of the Gor'kiy Automobile Plant is used for the production of crankshafts of the "Volga" automobile and shows good results, thus it may be recommended for mass production of high-strength cast iron parts. There are 3 photographs, 7 diagrams, 2 graphs, 1 table and 5 Soviet references.

ASSOCIATION: NIIT Avtoprom, Gor'kovskiy avtozavod, (Gor'kiy Automobile Plant), i Nauchno-issledovatel'skiy institut tekhniki avtomobil'noy promyshlennosti.

PETROVA, I.B., kand.tekhn.nauk; KHAZOVA, A.V., inzh.

Production of cast iron with spheroidal graphite by modification at greater than atmospheric pressure. Izv.vys.ucheb.zav.; mashinostr. no.4:11-16 '60. (MIRA 14:4)

1. Moskovskiy avtomekhanicheskiy institut.
(Cast iron—Metallurgy)

KHAZOVA, I.I.

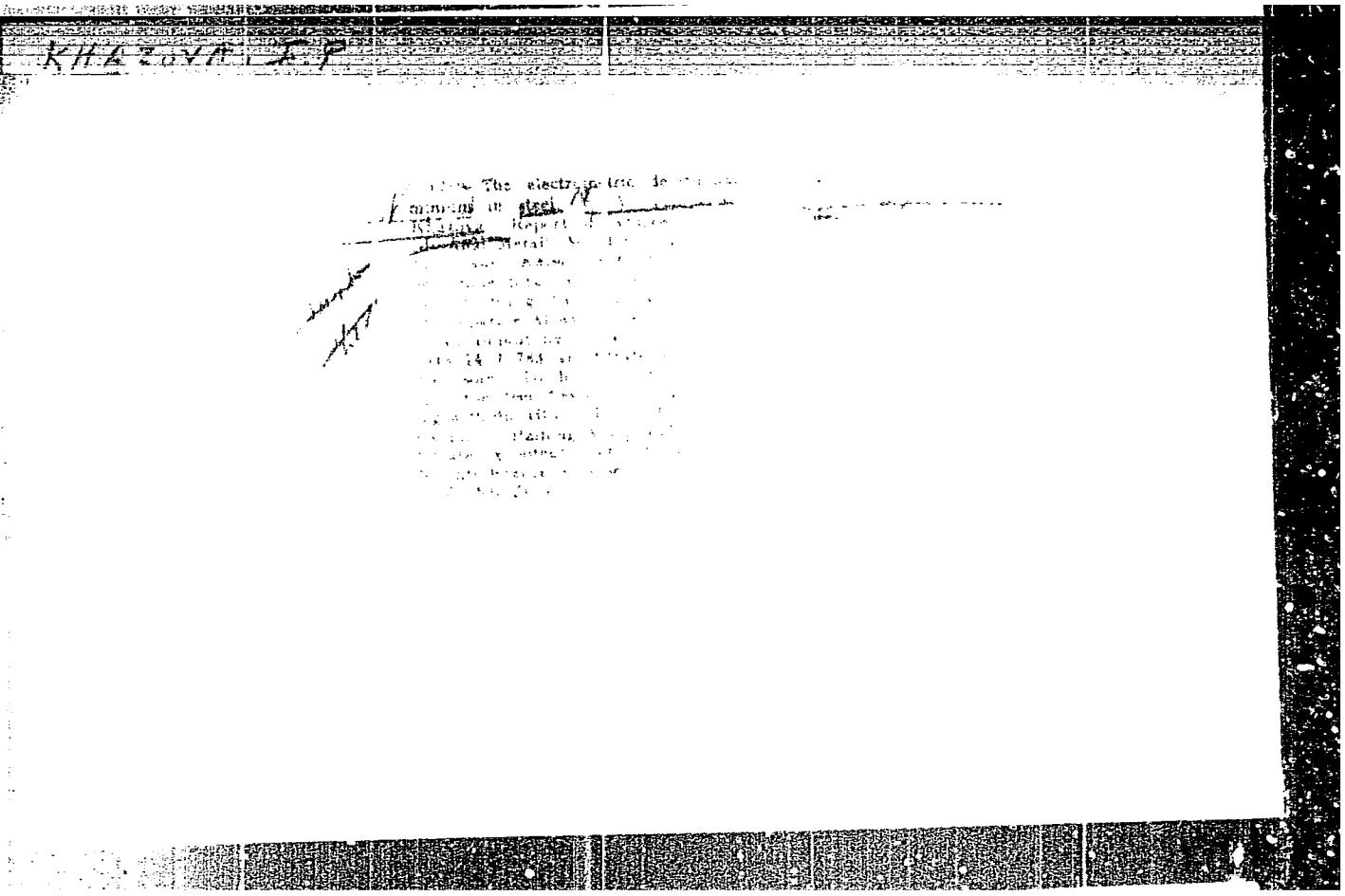
Medicinal plants of Bostandykskiy District, Uzbek.S.S.R. used in Oriental medicine. Trudy Inst. kraev. eksper. med. no.4:133-137'62. (MIRA 16:6)
(BOSTANDYKSKIY DISTRICT—BOTANY, MEDICAL)

KHAZOVA, I.I.

Identification of medicinal plants used in Oriental medicine. Vop. biol. i kraev. med. no.4:429-432 '63. (MIRA 17:2)

Addition of hydrogen to acetylenic compounds. XL. Catalytic hydrogenation of ethers of acetylene γ-glycols. Yu. S. Zal'kind and I. P. Khazova. *Zhur. Obshchei Khim.* (J. Gen. Chem.) 18, 2135–44(1948); cf. *C.A.* 43, 1308e.—Hydrogenation of $Me_2C(OH)C{:}CCMe_2OH$ ethers (di-Me, di-Bu, and mono-Bu) proceeds (Pd and Pt black) faster than the reaction with the glycol itself (for the *di-Me ether* (I), and slower for *di-Bu ether* (II). I, prepd. according to Mameday (14.2 g. of the glycol stirred 24 hrs. with 30 ml. MeOH and 4 ml. H_2SO_4) in 72% yield, b. 104–6°, d_{20} 0.8679, n_D^{20} 1.42777 (purified by treatment with EtMgBr); in addn. a small amt. of $Me_2C(OMe)C{:}CCMe{:}CH_2$, b. 155.6°, was obtained. Hydrogenation of I in EtOH with Pd proceeds readily and continues to complete satn.; 0.01 mol. with 1 mg. Pd absorbs at room temp. 501.6 ml. H in 5 min., 150 ml. in 10 min.; with 5 mg. Pd 250 ml. in 5 min.; with 0.154 g. Pt 84 ml. in 5 min., or 10 min. are required for 2 H and 110 min. for 4 H atoms, while with 0.5175 g. Pt these values are 224, 5.5, and 29, resp. The hydrogenation products are: $[Me_2C(OMe)CH:]_2$, b. 179–80°, d_4^{15} 0.8533, n_D^{20} 1.42807, and $[CH_2C(OMe)Me]_2$, b. 183–4°, d_4^{15} 0.8540, n_D^{20} 1.42568. Oxidation of the former by $KMnO_4$ gave $Me_2C(OMe)CO_2H$ (Ag salt) and *2,5-dimethyl-2,5-dimethoxy-3,4-hexadione*, b. 84–7° [*semicarbazone*, m. 148–80° (decompn.)]. The Bu ethers were prepd. by heating 20 g. glycol with 70 ml. BuOH and 3.5 ml. H_2SO_4, 24 hrs. at 80–90°, with purification as above, giving 16.8 g. crude *di-Bu ether* (pure substance, b. 182–4°, d_4^{15} 0.8510, n_D^{20} 1.43507), and 8.8 g. *mono-Bu ether*, b. 213–14°, d_4^{15} 0.8727, n_D^{20} 1.43818. On hydrogenation the former (0.01 mol.) with 5 mg. Pd takes up 100 ml. H in 5 min., 185 ml. in 10 min.; with 0.5175 g. Pt 162 ml. H is taken up in 5 min. and 8 min. is required for addn. of 2 H and 96 min. for 4 H atoms; hydrogenation of the mono-Bu ether with 5 mg. Pd utilizes 170 ml. H in 5 min., 222.8 ml. in 10 min., while 0.5175 g. Pt causes 181 ml. H to be used in 5 min., with 7 min. required for addn. of 2H and 28 min. for 4 H atoms. The products are: $[Me_2C(OBu)CH:]_2$, b. 190–1°, d_4^{15} 0.8475, n_D^{20} 1.43548; $[Me_2C(OBu)CH_2]_2$, b. 199–200°, d_4^{15} 0.8367, n_D^{20} 1.43217, $Me_2C(OBu)CH:CH{:}C(OH)Me_2$, b. 217–18°, d_4^{15} 0.8723–223–5°, d_4^{15} 0.8703, n_D^{20} 1.43849. (It is stated that the products may not be completely pure as only small amts. were dealt with and close fractionation was necessary.) On bromination the acetylene glycols added only 2 Br (in $CHCl_3$ at 0°) but the products could not be distd.; similarly undistillable products were obtained on addn. of 2 Br to the ethylene derivs. (products of addn. of 2 H), the products usually evolved HBr on storage. XLI. Factors which determine the course of catalytic hydrogenation of acetylene glycols in respect to their structures. Yu. S. Zal'kind. *Ibid.* 2149–52.—Hydrogenation (with Pd) of acetylenic glycols leads to easy addn. of 2 H, after which the reaction slows down considerably. In acetylenic alcs., however, 4 H add readily. The size, and more particularly the nature, of the radicals on the OH-carrying C atoms is important, as these may exhibit a steric screening effect across the unsatd. bond; thus the tetra-Et deriv., $Et_2C(OH)C{:}C(OH)Et_2$, hydrogenates much slower than the di-cyclotetramethylene deriv., $CH_2.CH_2.CH_2.CH_2C(OH);C:CC(OH).CH_2.CH_2.CH_2.CH_2$ (in which screening is excluded). In addn. the really important factor is H bonding of OH of the glycols with the β-C carbons of the unsatd. linkage. The mesomeric structures possible are considered and at least 2 appear to have equal weight, thus contributing to the stability of such a latent 5-atom ring. In acetylene alcs. such equivalence is impossible.

G. M. Kosolapoff



SOV/137-59-1-2172

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 285 (USSR)

AUTHORS: Ryazanov, I. P., Khazova, I. P.

TITLE: Microcrystalloscopic Reaction for Detection of Silver With O-nitrophenolphosphenylic Acid (Mikrokristalloskopicheskaya reaktsiya otkrytiya serebra o-nitrofenolfosfenilistoy kislotoy)

PERIODICAL: Sb. nauchn. tr. Magnitogorskiy gorno-metallurg. in-t, 1958, Nr 16, pp 141-145

ABSTRACT: The O-nitrophenylphosphenylic ["-phenol-" in title, "-phenyl-" in abstract, per Russian text; Trans. Note] acid $C_6H_4(NO_3)OPHOH$ (I) forms with Ag^+ a white crystalline I-Ag precipitate; with Hg^{2+} and Pb^{2+} I forms amorphous white precipitates. Besides Hg_2^{2+} and Pb^{2+}, the reaction of Ag with I is impeded by Sb and Bi. One drop of 0.5-M solution of I is mixed with one drop of $AgNO_3$ solution (1.27 g of salt in 100 cc of water). Rectangular and square laminae of Ag-I salt precipitate immediately. They darken slightly in air and melt with decomposition at 203-205°C. The salt is soluble in HNO_3, in NH_4OH, and in water (1.5 g/liter), but is insoluble in alcohol and benzol. The sensitivity of the reaction is 0.25γ at a 1:80,000

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Microcrystalloscopic Reaction for Detection of Silver (cont.)

dilution. 0.1 g of ore is dissolved with heating in several drops of concentrated HNO_3; the excess of acid is removed by evaporation. The cooled solution is filtered, and the Ag is detected in the filtrate. Bi^{3+}, Sb^{3+}, and Sb^{5+} are removed with ammonia. The reaction is used for detecting Ag in galenite and tetrahedrites, such as arsenofahlerz and antimonfahlerz.

F. I.

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RYAZANOV, I.P.; KHAZOVA, I.P.

Arylphosphinic acids acids as a new group of reagents for analysis. Izv.vys.ucheb.zav.; khim.i khim.tekh 2 no.4: 490-492 '59. (MIRA 13:2)

1. Magnitogorskiy gorno-metallurgicheskiy institut. Kafedra obshchey i analiticheskoy khimii.
(Phosphinic acid) (Chemical tests and reagents)

KHAZOVA, I.P.

Photocolorimetric determination of zinc in ores with the aid of 3-hydroxy-1-o-nitrophenyl-3-phenyltriazene. Izv.vys.ucheb.zav.;khim. i khim.tekh. 6 no.2:218-222 '63. (MIRA 16:9)

1. Magnitogorskiy gornometallurgicheskiy institut, kafedra obshchey i analiticheskoy khimii.
(Zinc ores) (Triazene) (Photocolorimetry)

GUR'YEVA, Ye.L.; [illegible], A.N.; [illegible], R.M.; KHAZOVA, M.Ya.

Epidemiological and some clinical virological data on poliomyelitis in Leningrad before and following vaccination (1940-1962). Trudy Len. inst. epid. i mikrobiol. 26:9-27 '64.
(MIRA 18:12)

S/153/60/003/003/018/036/XX
B016/B058

AUTHORS: Fioshin, M. Ya., Khazova, O. A.

TITLE: Study of the Anodic Process at the Electrolysis of Mixtures From Sulfuric Acid and Acetic Acid. I. Study of the Kinetics Dependence of the Anodic Process on the Composition of the Mixtures From Sulfuric Acid and Acetic Acid

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1960, Vol. 3, No. 3, pp. 443 - 446

TEXT: The authors report on their study of the anodic reaction at the d.c. electrolysis of a mixture from anhydrous sulfuric acid and acetic acid (H_2SO_4 and CH_3COOH). They presumed the existence of solvents in these systems and studied their influence on the kinetics of the anodic process. The method of the curves of polarization was used therefore. The electrolytic cell represented an H-type vessel, in which the cathode

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Study of the Anodic Process at the Electrolysis of Mixtures From Sulfuric Acid and Acetic Acid. I. Study of the Kinetics Dependence of the Anodic Process on the Composition of the Mixtures From Sulfuric Acid and Acetic Acid

and anode space were separated by a cock. The anode consisted of carefully polished platinum, its design corresponding to that by N. A. Izgaryshev and Ye. A. Yefimov (Ref.9). A sulfate electrode $Hg \| Hg_2SO_4$, filled with saturated Na_2SO_4 solution, served as reference electrode. The curves of polarization (Fig.1) determined by the author covered a concentration range of H_2SO_4 in the mixture from 20 to 100 mole% and were recorded for 13 compositions within this range. On the basis of these results the authors state in conclusion that the equation by Tafel is valid in the investigated system during the electrolysis for a wide concentration range at current densities between $2.22 \cdot 10^{-5}$ and $2.22 \cdot 10^{-3}$ a/cm^2. The curve of the dependence of the coefficient b (in the equation by Tafel $b = \frac{d\varphi_a}{d \log I_a}$, φ_a being the anode

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S/153/60/003/004/015/040/XX
B020/B054

AUTHORS: Fioshin, M. Ya., Khazova, O. A., Ignat'yeva, L. A.

TITLE: Study of the Anode Process in the Electrolysis of Mixtures of Sulfuric and Acetic Acid. II. Effect of the Solution Composition on the Ratio of Components in the Mixture of Anode Gases

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1960, Vol. 3, No. 4, pp. 637 - 641

TEXT: The authors attempted to study the composition of gases liberated from the anode in the electrolysis of an anhydrous mixture of sulfuric and acetic acid, and their dependence on the composition of the solution. The gases liberated from the anode were analyzed by a ВТИ-2 (VTI-2) gas analyzer. The analytical method was based on a successive and selective absorption of the principal components of the gas mixture by various absorbents, and on a combustion of hot gases with subsequent analysis of the combustion products. The authors determined CO_2 by 33% KOH, the

Study of the Anode Process in the Electrolysis of Mixtures of Sulfuric and Acetic Acid. II. Effect of the Solution Composition on the Ratio of Components in the Mixture of Anode Gases

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B020/B054

unsaturated hydrocarbons by a KBr solution saturated with bromine vapors, O_2 by a basic pyrogallol solution, CO by a Cu_2O suspension in concentrated H_2SO_4 absorbed with β-naphthol, H_2 by combustion over CuO at 270-280°C, and the saturated hydrocarbons by combustion over CuO at 850-950°C. Sulfuric and acetic acid must be highly pure, and not contain any water. Electrolysis was conducted in a cylindrical glass vessel with a ground in glass stopper, with fused-in electrodes, and a tube to draw off the gas. The anode used was a smooth platinum net with a surface of 63.5 cm^2. The anode space was separated from the cathode space by a ceramic diaphragm. The current source used was a storage battery with a voltage of 80 v. Electrolysis was conducted in an anhydrous H_2SO_4 - CH_3COOH mixture in an interval of 20-80 mole% of H_2SO_4. Ten different compositions (20, 25, 30, 33, 35, 45, 50, 55, 60, and 80% H_2SO_4) were analyzed. For each composition, the gas analysis was conducted at three current densities: $2.78 \cdot 10^{-4}$, $5.5 \cdot 10^{-4}$, and

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Study of the Anode Process in the Electrolysis of Mixtures of Sulfuric and Acetic Acid. II. Effect of the Solution Composition on the Ratio of Components in the Mixture of Anode Gases

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B020/B054

$1.58 \cdot 10^{-3}$ a/cm^2, which corresponded to the lower, central, and upper part of the curve $\varphi_a = f(\log I_a)$. The change in the ethane- (Fig.1), carbon dioxide- (Fig.2), and oxygen content (Fig.3) in dependence on the solution composition was observed. The Kolbe synthesis proceeded in a mixture containing up to 50 mole% of H_2SO_4 at current densities of from $2.78 \cdot 10^{-4}$ to $1.58 \cdot 10^{-3}$ a/cm^2. Besides the Kolbe synthesis, an intensive oxidation of acetic acid to CO_2 and water is likely to proceed on the anode. At concentrations higher than 50 mole% of H_2SO_4, this reaction proceeds jointly with the release of oxygen. The formation of solvates influences the composition of anode gases. In the diagram $C_{O_2} = f(C_{H_2SO_4})$, the points of solvate formation correspond to the maximum, in the diagram $C_{CO_2} = f(C_{H_2SO_4})$ to the minimum. N. I. Dedusenko (Ref.5) is mentioned. There are 3 figures and 10 references: 3 Soviet,

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Study of the Anode Process in the Electrolysis of Mixtures of Sulfuric and Acetic Acid. II. Effect of the Solution Composition on the Ratio of Components in the Mixture of Anode Gases

S/153/60/003/004/015/040/XX
B020/B054

3 British, 3 German, and 1 Swiss.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva, kafedra tekhnologii elektrokhimicheskikh proizvodstv (Moscow Institute of Chemical Technology imeni D. I. Mendeleyev, Department for the Technology of the Electrochemical Industry)

SUBMITTED: October 20, 1958

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RM/RWH

S/0364/65/001/001/0084/0089

AP5007756

Vasil'yev, Yu.

of methanol

As a result of the strong effect which the adsorption of ... the adsorption maximum is not determined by the ... methanol, the

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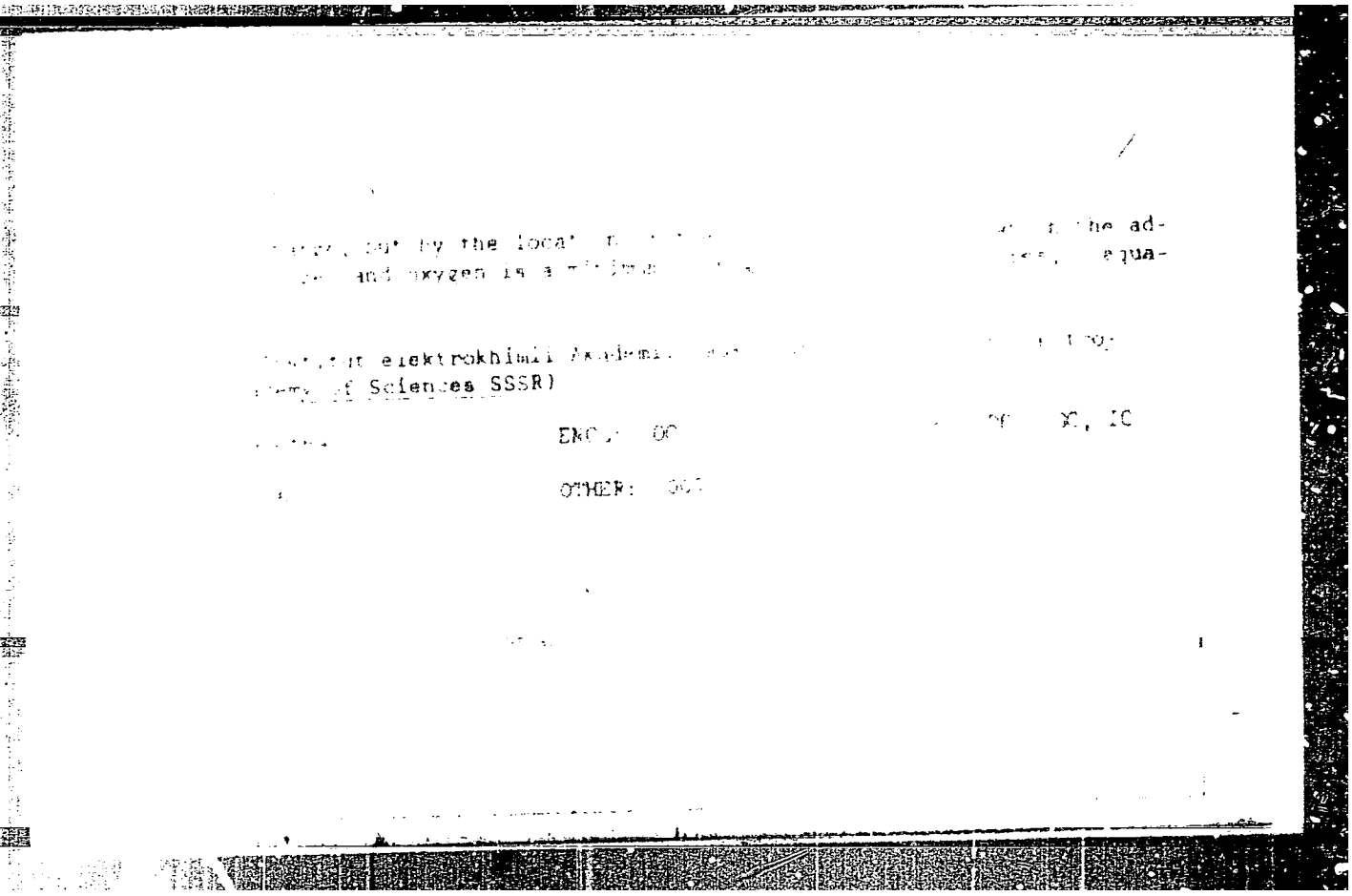

KHAZOVA, O.A.; VASIL'YEV, Yu.B.; BAGOTSKIY, V.S.

Effect of the adsorption of foreign ions and molecules on the oxidation rate of organic substances on a platinum electrode. Elektrokhimiia 1 no.4:439-445 Ap '65. (MIRA 18:6)

1. Institut elektrokhimii AN SSSR.

KHAZOVA, O.A.; VASIL'YEV, Yu.B.; BAGOTSKIY, V.S.

Electrolytic oxidation of organic substances on a platinum electrode. Report 1: General aspect of potentiostatic curves and the nature of inhibition of electrochemical oxidation processes. Izv. AN SSSR. Ser. khim. no.9:1531-1539 '65. (MIRA 18:9)

1. Institut elektrokhimii AN SSSR.

KHAZOVA, O.A.; VASIL'YEV, Yu.B.; BAGOTSKIY, V.S.

Electrolytic oxidation of organic substances on a platinum electrode. Report No.2: Kinetics of oxidation of alcohols, aldehydes, and carboxylic acids with the estimation of the surface inhomogeneity of the platinum electrode. Izv. AN SSSR. Ser.khim. no.10:1778-1787 '65. (MIRA 18:10)

1. Institut elektrokhimii AN SSSR.

EWT(m)/EWP(j)/T DS/JW/RM

ACC NR: AP6019235 (A) SOURCE CODE: UR/0364/66/002/003/0267/0276

AUTHOR: Khazova, O. A.; Vasil'yev, Yu. B.; Bagotskiy, V. S.

ORG: Institute of Electrochemistry, Academy of Sciences, SSSR, Moscow (Institut elektrokhimii Akademii nauk SSSR)

TITLE: The mechanism of electrolytic oxidation of methanol on a smooth platinum electrode

SOURCE: Elektrokhimiya, v. 2, no. 3, 1966, 267-276

TOPIC TAGS: electrochemistry, oxidation, polarization, methanol, platinum, electrode, acid solution, kinetics, chemisorption

ABSTRACT: The chemisorption and electrolytic oxidation of methanol were studied by steady state polarization experiments, in solutions of 1 N H_2SO_4 with methanol concentrations ranging from 10^{-3} to 5 M. At low potentials (relative to a hydrogen electrode), the polarization curves for smooth platinum electrodes obeyed the Tafel equation with slopes of 0.110-0.125. Above 0.6 v, deviations occurred because of the increase in the speed of adsorption and dehydrogenation of methanol over the steady state speed of electrooxidation. The speed of adsorption is given by $i = k \cdot c^{\beta}$, where c - volume concentration of methanol and $\beta \approx 0.5$; above c - 1 M, i reached a maximum. The speed of electrooxidation depended on θ - the degree of surface coverage of the

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Card 2/2 UDC: 541.13

KHAZOVA, O. N.

BORISOVA, Ye.I.; KHAZOVA, O.N.

Recurrence of certain types of stationary anticyclones. Trudy TSIP no.56:31-70 '57. (MLRA 10:8)

(Cyclones)

KHAZOVA, O. N.

3(7) PHASE I BOOK EXPLOITATION SOV/3031

Moscow. Tsentral'nyy institut prognozov

Voprosy dolgosrochnykh prognozov (Problems in Long-Range Forecasting) Moscow, Gidrometeoizdat (otd.) 1958. 104 p. (Series: Its: Trudy, vyp. 73) 1,100 copies printed.

Sponsoring Agency: USSR. Glavnoye upravleniye gidrometeorologicheskoy sluzhby.

Ed.: (title page): V.M. Kurganskaya; Ed. (inside book): V.I. Tarukhunova; Tech. Ed.: I.M. Zarkh

PURPOSE: This issue of the Institute's Transactions is intended for meteorological and hydrographic specialists working in the field of long-range weather forecasting.

COVERAGE: This collection of articles deals with aspects of extended weather forecasting. Individual articles discuss: synoptic conditions of wind regimes most favorable to shipping along the Northern Sea Route [Soviet Arctic Seas]; synoptic conditions underlying a continuous ice cover in various parts

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of the Sea of Azov; a method for compiling daily schematic 500-mb contour maps (AT_{500}) for 3 days by utilizing an equation of the conservation of vortex velocity and temperature regime; a method for the advance computation of the baric field for periods of 24, 48, and 72 hours; the determination of definite relationships for forecasting air temperature for a natural synoptic period. The results of actual tests in a series of investigations in extended forecasting are cited. References accompany each article.

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TURKETTI, Z.L., KHAZOVA, O.N.

Nature and conditions of the formation of mean monthly temperature anomalies in July in the European part of the U.S.S.R. and Western Siberia and their possible prediction. Trudy TSIP no.89:41-73 '60. (MIRA 14:3)
(Weather forecasting)

AVERBUKH, S. [redacted] BEDRINA, V. S.; KHAZOVA, O. N.

Criticizing inaccurate 3- to 7-day weather forecasts. Trudy TSIP no.119:82-97 '62. (MIRA 16:1)

(Weather forecasting)

KHAZOVSKIY, I.L., inzhener.

Socialist competition of two electric power stations. Energetik 3 no.5:1-3 O '53. (MLRA 6:10)

(Electric power stations)

ZHURAVLEV, S.I., inzhener; KHAZOVSKIY, I.L., inzhener; KOLOTOVCHENKOV, M.N., tekhnik.

Eliminating dust formation in fuel feeding. Energetik 4 no.6: 12-13 Je '56. (MLRA 9:8)
(Coal-handling machinery)

KHAZOVSKIY, I.L., inzh.

Thermal electric power plant No.1 in Irkutsk is an enterprise of communist labor. Energetik 9 no.1:34-36 Ja '61.
(MIRA 16:7)

(Irkutsk—Electric power plants)

KHAZOVSKIY, I.L., inzh.

Reply to E.S.Ivanov's remark on "Simplification of the control systems of electric power plants." Elek. sta. 33 no.7:91-92 Jl '62. (MIRA 15:8)

(Electric power plants) (Ivanov, E.S.)

KHAZRON, G.P.

Device for cutting pipes of gas pipelines in operation.
Gaz. prom. 4 no.12:43-44 D '59. (MIRA 13:3)
(Gas pipes)

GUSEV, A.A.; KURNAKOV, K.V.; KOZLOV, Ye.A.; MITROFANOV, I.A.; KHAZRON, G.P.

Determining condensate accumulations in gas pipelines by a radiometric indicator. Gaz. prom. 10 no.8:42-45 '65. (MIRA 18:9)

KHCHEYAN, Kh. Ye., Candidate Tech Sci (diss) -- "Simultaneous production of phthalic acids and chloroform ". Moscow, 1959. 12 pp (Min Higher Educ USSR, Moscow Inst of Fine Chem Tech im M. V. Lomonosov), 150 copies (KL, No 22, 1959, 117)

5(1), 15(8) SOV/64-59-1-12/24

AUTHORS: Kruzhalov, B. D., Khcheyan, Kh. Ye.

TITLE: Joint Preparation of Phthalic Acids and Chloroform (Sovmestnoye polucheniye ftalevykh kislot i khloroforma)

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 1, pp 48-54 (USSR)

ABSTRACT: Besides the authors, also A. M. Sladkov, A. V. Arbatskiy and V. Z. Grishko participated in the first part of the investigations under the direction of the late Professor P. G. Sergeyev. In connection with the increase in production of synthetic fibers by 12-13 times under the new Seven-year Plan, new raw material sources are to be found for the preparation of the important phthalic acids (I). A method is suggested by which diethyl benzene (II) in the first stage is subjected to a liquid-phase oxidation with air besides small quantities of cobalt or manganese salts. The diacetyl benzene (III) obtained reacts in the second stage with a calcium hypochlorite solution and forms calcium phthalates and chloroform. The initial product for the experiments described was a fraction of (II) which was obtained in the benzene alkylation with ethylene at the Gorlovskiy azotnotukovyy zavod (Gorlovka Nitrogenous Manure Plant) (Table of the distil-

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Joint Preparation of Phthalic Acids and Chloroform

lation fractions). The isomeric composition of (II) was determined by the infrared absorption on the spectrometer IKS-11. The analysis showed that 31.5% para- and 64-65% meta-diethyl benzene were present. The oxidation of (II) was carried out in a laboratory reactor (Fig 1) which worked on the principle of an air lift with closed circuit and was connected to an experimental plant (Fig 2). A cobalt-oleate catalyst (0.6-0.7% of the quantity of (II)) proved to be most active. To determine optimum conditions, experiments at 120-150° (Table 1, Figs 3, 4) and with different oxidation times (Figs 5, 6) were carried out, and a temperature of 130° at a duration of 8 hours were found to be the optimum values. Under these conditions, also the unoxidized (II) and ethylacetophenone may be oxidized from the reflux with equal efficiency (Tables 2, 3). The composition of the oxidation product was computed by the analysis of the functional groups according to data of the distillation(Table 4). The hypochlorination was carried out in a flask with stirring apparatus (Fig 7); the results are given (Table 5). The separation of the phthalic acids was caused by the calcium salts which are variably soluble in water. A scheme for the described oxidation of (II)

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Joint Preparation of Phthalic Acids and Chloroform

in 2 stages for industrial use (Fig 8), as well as the corresponding material balance for 1 ton of (I) and 1.1 tons of chloroform, are indicated. There are 8 figures, 5 tables, and 11 references, 1 of which is Soviet.

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